Remarks

Prior to this amendment, claims 1-9 were pending in this application (of which claims 5 and 7-9 are withdrawn). Claims 1-4 and 6 (and withdrawn claim 5) are amended, and new claim 10 is added.

Support for the amendment of claims 1 and 6 can be found in the specification at least at page 4, lines 6-15; and page 9, lines 4-8. Support for the amendment of claims 3 and 4 can be found in the specification at least at page 6, lines 10-23 and page 13, line 29 through page 14, line 20. Withdrawn claim 5 is amended to parallel the scope of the examined claims. Support for new claim 10 can be found in the specification at least at page 5, lines 12-14 and page 6, lines 10-23.

No new matter is added by the foregoing amendments. After entry of this amendment, **claims 1-10** are pending in this application (of which claims 5 and 7-9 continue to be withdrawn). Consideration of the pending claims is requested.

Elections/Restrictions

Applicants acknowledge that the Office has made the election of Group I (claims 1-4 and 6) final and has withdrawn claims 5 and 7-9 as being drawn to non-elected inventions.

The Examiner has required a restriction between product and process claims. The Applicants have elected claims to a specific product. In accordance with M.P.E.P. § 821.04, if Applicants elect claims directed to the product, and a product claim is subsequently found allowable, withdrawn process claims which depend from or otherwise include all the limitations of the allowable product claim will be rejoined. Applicants expressly request that the method claims be rejoined and the claims examined, at the latest upon the allowance of any of the product claims. It is believed that this is in accordance with the current Patent and Trademark Office Guidelines for Restriction Requirements in TC1600.

Information Disclosure Statement

Applicants thank Examiner Bui for acknowledging that the Information Disclosure Statements filed on March 27, 2006 (and received by the Office on March 29, 2006), October 23, 2007, and December 17, 2007 are in compliance with 37 CFR 1.97 and for considering the listed references.

Claim Objections

Claim 6 is objected to for depending from a nonelected claim. Claim 6 is amended to be in independent form, thereby rendering this objection moot. Applicants respectfully request withdrawal of the objection of claim 6.

Claim Rejection under 35 U.S.C. §112, second paragraph

Claims 1-4 and 6 are rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. Applicants respectfully disagree. However, solely to advance prosecution of this case, claim 1 and claim 6 (amended to incorporate the subject matter of claim 5) are amended to include the term "fully" before "complimentary." In addition, claims 1 and 2 are amended to remove the term "ortholog," as suggested by the Office. As claim 6 is amended to be in independent form, the Office's suggestion to amend the phrase "a method" to "the method" is no longer relevant. In view of the above discussion and amendments, Applicants respectfully request withdrawal of the rejections under 35 U.S.C. §112, second paragraph.

Claim Rejection under 35 U.S.C. §101

Claims 3 and 4 are rejected under 35 U.S.C. §101 as allegedly directed to non-statutory subject matter because "the plant part and seed may not contain transgenic material" (Office action at page 4). Solely to advance prosecution in this matter, claims 3 and 4 are amended to refer to a plant part (claim 3) or a seed (claim 4) "comprising said plant transformation vector." In view of the amendments to the claims, Applicants respectfully request withdrawal of the rejections under 35 U.S.C. §101.

Claim Rejection under 35 U.S.C. §112, first paragraph (written description)

Claims 1-4 and 6 are rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement because the term "'ortholog' lacks adequate written description" (Office action at page 4). Applicants respectfully disagree. However, solely to advance prosecution in this case, claims 1 and 2 are amended to remove the term "ortholog."

The Office also rejects the claims because they "encompass sequences from other species, none of which are disclosed. The claims also encompass mutants and allelic variants and thus imply that structural variants exist in nature, yet no structural variant has been disclosed" (Office action, paragraph bridging pages 4 and 5). Applicants respectfully traverse this rejection. As established in *Ex parte Parks*, "adequate description under the first paragraph of 35 U.S.C. 112 does not require literal support for the claimed invention. . . . Rather, it is sufficient if the originally-filed disclosure would have conveyed to one having ordinary skill in the art that an appellant had possession of the concept of what is claimed" *Ex parte Parks,* 30 USPQ2d 1234, 1236-37 (B.P.A.I. 1993) (emphasis added). Moreover, the MPEP at §2163 states that "[w]hat is conventional or well known to one of skill in the art need not be disclosed in detail. *See Hybritech Inc. v. Monoclonal Antibodies, Inc.,* 802 F.2d at 1384; 231 USPQ at 94. If a skilled artisan would have understood the inventor to be in possession of the claimed invention at the time of filing, even if every nuance of the claims is not explicitly described in the specification, then the adequate description requirement is met. *Vas-Cath*, 935 F.2d at 1563, 19 USPQ2d at 1116; *Martin v. Johnson,* 454 F.2d 746, 751, 172 USPQ 391, 395 (CCPA 1972) (stating "description need not be in *ipsis verbis* [*i.e.,* "in the same words"] to be sufficient")."

In the current instance, amended claims 1 and 6 recite "a plant transformation vector comprising a heterologous nucleotide sequence that (i) encodes a DRO5 polypeptide comprising an amino acid sequence at least 90% identical to the amino acid sequence of SEQ ID NO: 2, or (ii) is fully complementary to a sequence that encodes a DRO5 polypeptide comprising an amino acid sequence at least 90% identical to the amino acid sequence of SEQ ID NO: 2." This language clearly and structurally describes the molecules that fall within the scope of Applicants' claims. Moreover, the original disclosure clearly conveys that Applicants had possession of the claimed invention, and certainly of the concept of what is currently claimed. Applicants had

possession of the polypeptide sequence in SEQ ID NO: 2; Applicants had also contemplated and provided explicit written description of polypeptides with at least 90% sequence identity to that sequence (for example, at page 9, lines 9-12). Further, the specification describes how to determine which sequences have at least 90% sequence identity to SEQ ID NO: 2 (for example, at page 9, line 25 through page 10, line 3). Methods are also provided for determining which residues are highly conserved (for example, at page 10, lines 3-14); for the generation of transgenic plants (at page 13, line 9 through page 16, line 32); and for determining if a plant (particularly a transgenic plant) produces a drought tolerance phenotype (see Examples 1-4). Therefore, based on the teachings of the specification and the knowledge of one of skill in the art, a person of ordinary skill could envision sequences having at least 90% sequence identity (including mutants and allelic variants) to the sequence set forth in SEQ ID NO: 2. The amended claims are thus sufficiently described by the specification, and Applicants request that the rejection under 35 U.S.C. §112, first paragraph, be withdrawn.

Claim Rejection under 35 U.S.C. §102

Shuai *et al.*

Claims 1-4 and 6 are rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Shuai *et al.* (*Plant Physiol.*, 129:747-761, 2002) because "Shuai teaches a sequence which has 99.9% sequence identity to SEQ ID NO: 1 and 100% sequence identity to SEQ ID NO: 2 [and] A plant was transformed with said sequence (p. 751, "Alternations in Expression of LOB")" (Office action at paragraph bridging pages 5 and 6). Applicants respectfully traverse this rejection.

Shuai *et al.* discloses GenBank Protein ID Number 3193318 (also referred to as LBD30; Table 1), which is 100% identical to Applicants' DR05 (SEQ ID NO: 2) polypeptide sequence. Shuai *et al.* also discloses transgenic plants transformed with one (and only one) of the genes disclosed in Table 1 (*LOB* – but *NOT* LBD30) fused to the cauliflower mosaic virus 35S promoter (page 751, left column, last paragraph). However, the protein encoded by *LOB* (GenBank Protein ID Number 10177290, Table 1) is only 47% identical to Applicants' SEQ ID NO: 2 (see alignment between GenBank Protein ID Number 10177290 and Applicants' SEQ ID

NO: 2 (Subject ID 32133) – **Exhibit A**). Thus, Shuai *et al.* does not disclose a plant transformed with the DR05 (SEQ ID NO: 2) sequence.

Furthermore, although Shuai *et al.* does indicate that wildtype *Arabidopsis* plants express LBD30 (page 759, "Expression Analysis"), it **does not** disclose detecting the expression of DR05 (LBD30; SEQ ID NO: 2) in genetically engineered transgenic plants. Thus, Shuai *et al.* cannot anticipate Applicants' claims since it does not disclose a transgenic plant comprising "a plant transformation vector comprising a heterologous nucleotide sequence that (i) encodes a DRO5 polypeptide comprising an amino acid sequence at least 90% identical to the amino acid sequence of SEQ ID NO: 2, or (ii) is fully complementary to a sequence that encodes a DRO5 polypeptide comprising an amino acid sequence at least 90% identical to the amino acid sequence of SEQ ID NO: 2," as required by the claims. In view of the above discussion, Applicants respectfully submit that claims 1-4 and 6 are not and cannot be anticipated by Shuai *et al.* and request that this rejection of claims 1-4 and 6 be withdrawn.

McCourt *et al.*

Claims 1-4 and 6 are rejected under 35 U.S.C. §102(b) as allegedly being anticipated by McCourt *et al.* (U.S. Patent Application No. 2001/0044938) because "McCourt *et al.* teaches a transgenic plant and seed containing a nucleic acid molecule encoding farnesyl transferase which enhances drought tolerance in a plant" (Office action at page 6). Applicants respectfully traverse this rejection. As discussed above, amended claims 1 and 2 do not refer to orthologs of SEQ ID NO: 2. Moreover, McCourt *et al.* does not disclose transgenic plants comprising "a plant transformation vector comprising a heterologous nucleotide sequence that (i) encodes a DRO5 polypeptide comprising an amino acid sequence at least 90% identical to the amino acid sequence of SEQ ID NO: 2, or (ii) is fully complementary to a sequence that encodes a DRO5 polypeptide comprising an amino acid sequence at least 90% identical to the amino acid sequence of SEQ ID NO: 2," as required by the amended claims. Farnesyl transferase (as disclosed in McCourt *et al.*) is only 15.7% identical to Applicants' SEQ ID NO: 2. In view of the amendments to the claims, Applicants respectfully submit that claims 1-4 and 6 are not and cannot be anticipated by McCourt *et al.* and request that this rejection of claims 1-4 and 6 be withdrawn.

Conclusion

Based on the foregoing amendments and arguments, the claims are in condition for allowance and notification to this effect is requested. If any matters remain to be addressed before a Notice of Allowance is issued, the Examiner is formally requested to contact the undersigned prior to issuance of the next Office action, in order to arrange a telephonic interview. It is believed that a brief discussion of the merits of the present application may expedite prosecution.

Respectfully submitted,

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